## MINUTES.

## Stated Meeting May 4, 1906.

President SMITH in the Chair.

Dr. David L. Edsall, a newly elected member, was presented to the Chair and took his seat in the Society.

Letters accepting membership were read from:

Hon. Joseph Hodges Choate, New York.

John W. Harshberger, Ph.D., Philadelphia.

William Francis Hillebrand, Ph.D., Washington.

Charles Rockwell Lanman, LL.D., Cambridge, Mass.

Ernest Fox Nichols, D.Sc., New York City.

Hon. Elihu Root, LL.D., Washington.

Thomas Day Seymour, LL.D., New Haven, Conn.

Edward Bradford Titchener, M.A., Ithaca, New York.

Otto Hilgard Tittmann, Washington.

Dr. Hendrik Antoon Lorentz, Leyden.

The decease was announced of Mr. Edward Floyd deLancey, at Spining, N. Y., on April 7, 1905, æt. 83.

The following letter was read from PROF. GEORGE DAVIDSON, of San Francisco, in relation to

THE SAN FRANCISCO-EARTHQUAKE OF APRIL 18, 1906.

In the matter of the earthquake of April 18, while you were celebrating the two hundredth anniversary of the birth of Benjamin Franklin, I beg to give the following memorandum as a matter of record:

The shock occurred at  $5^{b}$  12<sup>m</sup> 00<sup>e</sup> A. M., Pacific standard time. The first movement was short and sharp, north and south, and of slight amplitude at my home 300 feet above the Bay; it changed to movements east and west and every direction, with very quick shocks (say four per second), of small amplitude and complex, for 60 seconds; when a slight but gradual weakening was apparent for 30 seconds more. After this the vibrations weakened gradually to quietness in another 60 seconds. The whole movements occupied 2<sup>m</sup> 30<sup>e</sup>. I began my count with the first shock, and soon afterwards timed the event with my chronometer watch.

The sensation suggested the sharp vicious action of a terrier seizing and shaking a rat.

There was a slight shock at  $5^{h}$   $17^{m}$  (approx.) and another at  $5^{h}$   $29^{m}$  (approx.) and some later ones of no consequence.

In other parts of the city and the adjoining districts the amplitude of the shocks has been much greater, if we judge by results; and yet very unequal.

The general indications point to this statement: That the greatest ampli-

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tude of the movement of the immediate earth surface is to be found in low alluvial situations or in made-land areas.

That was the deduction in 1868; with indications that at the extremity of a rocky ridge the full amplitude was seen.

The report of the 1868 Committee (of which I was a member), was never made public.

The Governor of California, George C. Pardee, has appointed the following persons members of a committee to investigate the phenomena of this earthquake: Professors A. C. Lamson, University of California (geology), G. K. Gilbert, U. S. Geol. Survey (geology), Harry Fielding Reid, Johns Hopkins University (geology), J. C. Branner, Stanford University (geology), A. O. Leuschner, University of California (geodesy, astronomy), George Davidson, University of California (geodesy, geography), Charles Burchatter, Chabot Observatory. This board has already met to confer on the plan of investigation.

I may mention here, incidentally, that the number of deaths officially reported as occurring from the earthquake and fire, is 277.

There is no epidemic; there is capital order, with the military in charge; and those who remain are stout-hearted; 125,000 encamped in parks, etc., are being fed.

This is the sixty-third earthquake I have experienced.

SAN FRANCISCO, April 25, 1906.

This communication was discussed by Professor Haupt, Dr. Goldsmith, Mr. Wharton and Mr. Richard Wood.

The following papers were read:

"Prof. de Vries' Theory of Evolution in Relation to Results," by Dr. Philip Calvert, which was discussed by Dr. Conklin and Dr. Calvert.

"The New Agriculture," by Mr. Burnet Landreth.

"The Present Condition of the Bar at Aransas Pass, due to the Operation of the Reaction Breakwater," by Prof. Louis M. Haupt.

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